

The Managerial Context for the DoD Open Systems Architecture
June 19, 1991

Office of the Director of Defense Information

**The Managerial Context
for the
DoD Open Systems Architecture**

George Mason University Symposium
June 19, 1991

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The First Principle of War

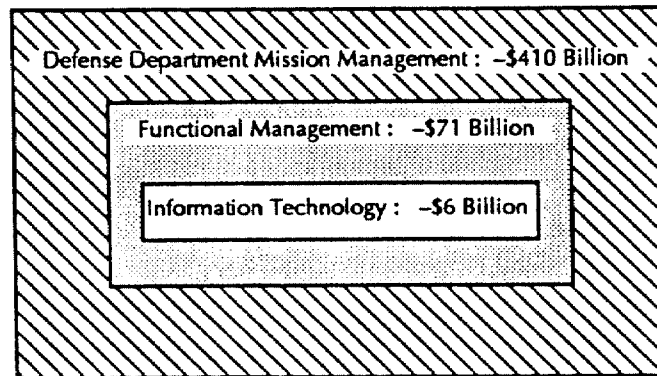
"Never go to war without a clear objective."

Lt. Gen. Thomas Kelly

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The CIM Tasks for 1990-1997



Note: Excludes embedded and most C3I systems.

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The Objective of CIM

Increase military effectiveness while:

- ☛ Meeting the *Defense Management Review* functional cost reduction targets;
- ☛ Deploying information technology in support of functional cost reduction and effectiveness objectives.

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Framework for CIM Information Technology Objectives

DoD Missions:

- Rapid response to variable threats with less resources.

Functional Missions:

- Process redesign to improve operations/management ratio.
- 10-20x reduction in time to deliver information support.

Information Technology Missions:

- 100% re-usable data & infinite life for data definitions.
- 80%+ re-usable code & 20+ year life on software elements.
- 80%/20% development/maintenance ratio.
- Technology asset life > 2-3 times technology innovation cycle

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Example of Functional Ineffectiveness: Order for \$53.50 Book

Order #: A/1 2BSS IJW
Processing #: AS-0407-G4-0227
Contract #: MDA903-91-M-AN59
Requisition #: 8309/1060 (5061)
Certification #: C9e
Accounting Code #: 2112020.0000 0 22-2110 951212.00QWB
31EA 000000 83091060 5061 /S9AN00 023185
Voucher #: 299117
Check #: 6344-60761890

Issued by: Defense Supply Service, The Pentagon, Room 1D-245
Ship to: The Pentagon Library, Room 1A-518
Payment by: HQDA Fin. & Account. Office, St. Louis, MO, JDRS-FAO-D
Mail Invoice: USA Service Center, The Pentagon, Room 1B-865

NOTE: Identification has 150 elements, processed by four organizations passing information back and forth. High probable error rate. High costs. Delays. Estimated total administrative cost exceeds the price of the ordered item.

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Example of Functional Effectiveness: Order for \$53.50 Book

Order and Check #: W 08601
Fund #: 7210
Object #: 6941
Task #: STD
Activity/WA #: I1DISC
Buyer #: 777
Funding Source #: 636

Ship to: Information Sys. Coordinator, Phoenix, Arizona

NOTE: Identification has 29 elements, processed by one organization. High reliability. Low costs. Instant settlement. Estimated total administrative cost of the transaction less than \$2.

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On Information Systems Deficiencies

- "...on eight systems the estimate to develop and deploy systems doubled from \$1 to \$2 billion."
- "...the development of two systems had to be abandoned after spending about \$237 million."
- "...the completion dates for all but one system of the remaining six had been delayed by 3 to 7 years."

SOURCE: United States General Accounting Office, Automated Information Systems, GAO/AMTEC-90-36, p.15

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On Planning

"...What are being called Information Management Plans at the major command and installation levels are of little value in guiding long-term automation decisions.

Information Management Plan initiatives are typically based on ... procurement requests..."

SOURCE: United States General Accounting Office, Information Resources, GAO/AMTEC-90-58, June 1990, p.16

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Management Accountability

"... new systems generally did not adequately involve participants with a detailed knowledge of the cost and schedule implications. As result, trade-offs between costs and performance did not occur ...and the system concept included requirements which may be desirable but whose real costs far exceeds their value.

This environment does not encourage realistic estimates of costs and schedule because systems marketers must be optimistic about how much funding and time will be needed."

SOURCE: United States General Accounting Office, Information Resources, GAO/AMTEC-90-7, March 1990, p.10.

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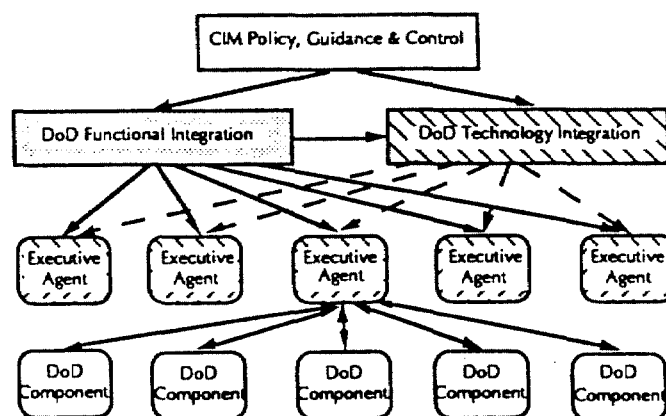
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First CIM Principle:

- **The customer - the Function with business process authority and performance accountability - defines systems requirements, manages implementation and measures results.**
- **The Information Technology organization becomes a fee-for-service technology service.**

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The CIM Organizational Schema



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Second CIM Principle:

- Simplify the business process before you computerize.
- Gain effectiveness and reduce costs by changing how people work.
- Apply technology only after you are sure that organizations can implement the changes.

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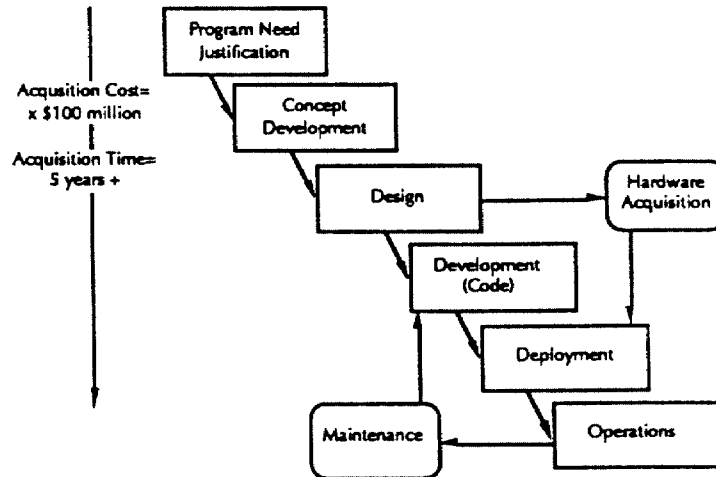
Third CIM Principle:

- Fastest progress, at lowest risk achieved by evolutionary migration.
- Organizations learn best by experiencing frequent successes.

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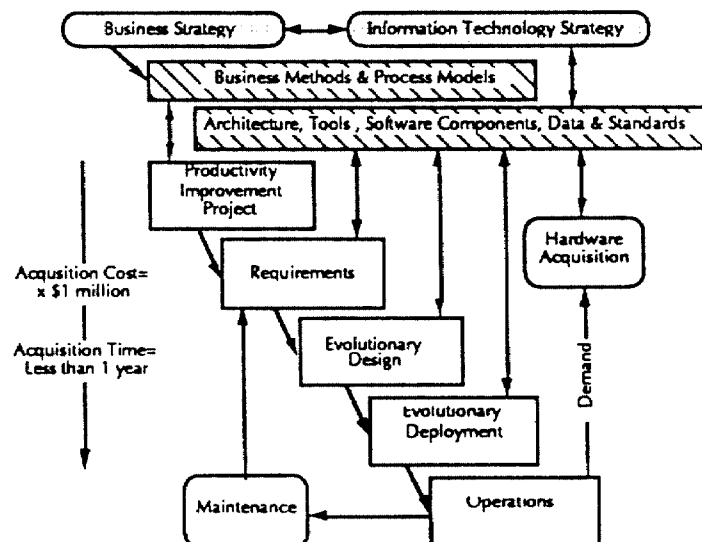
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The Current Acquisition Process



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An Evolutionary and Rapid Response Acquisition Process



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CIM Systems Principles

- ☛ Effective variety is constructed from standard elements.
- ☛ There are no *future systems*, no *interim systems*. There are only *migration systems*.
- ☛ Tightly focused rapid implementation within a generally defined strategy offers most gains and lowest risks.
- ☛ The ultimate technical objective of CIM are vendor-independent systems, assembled from standard components, inter-operable, with single-point data entry, non-redundant databases and freedom of customer choices.

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Current Actions

- #1: Commit to "Open Systems Architecture" [Exec. Agent: DISA].
- #2: Issue data definitions from DoD dictionary [Exec. Agent: Army].
- #3: Issue re-usable standard software modules from DoD Software Warehouse [Exec. Agent: Army].
- #4: Require use of Standard Integrated Computer-Aided Systems Engineering tools [Exec. Agent: Air Force].
- #5: Serve integration and Executive Agent personnel by means of a Support Network [Exec. Agent: DLA].
- #6: Require the use of standard Business Case financial methods [Exec. Agent: IDA].

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Current Actions

- #7: Set directions for rapid evolutionary deployment of information systems [Exec. Agent: MITRE].**
- #8: Create Functional Integration capabilities on the staff of the Assistant Secretaries of Defense.**
- #9: Create Technical Integration capabilities in DISA.**
- #10: Assign to the Information Resources Management College the task of defining CIM educational needs.**
- #11: Initiate search for "Gold Nugget" candidates [Examples: Corps of Engineers, Air Force Computer Services Center].**
- #12: Accelerate the policy formulation and budget authorization process [Examples: Information Technology Policy Board, CIM "marker" controls].**

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